MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

SOPREMA, Inc.
310 Quadral Drive
Wadsworth, OH 44281

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: SOPREMA ALSAN RS Roofing Systems over Steel Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This new NOA consists of pages 1 through 69.
The submitted documentation was reviewed by Jorge L. Acebo.

MIAMI-DADE COUNTY APPROVED

ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Liquid Applied Roof Systems
Material: PMMA
Deck Type: Steel
Maximum Design Pressure: -180 psf.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Alsan RS 230 Field	Various	Proprietary	A two component, rapid curing, PMMA liquid membrane.
Alsan RS 260 LO Field	Various	Proprietary	Low odor, rapid curing, PMMA liquid membrane.
Alsan RS 230 Flash	Various	Proprietary	A two component, rapid curing, PMMA liquid membrane.
Alsan RS 260 LO Flash	Various	Proprietary	Low odor, rapid curing, PMMA liquid membrane.
Alsan RS Fleece	Various	Proprietary	Non-woven, needle-punched polyester fabric reinforcement used as fabric reinforcement in Alsan RS systems
Sopra G	39" x 108' (3.5 sq.)	ASTM D4601	Fiberglass reinforced oxidized asphalt base sheet for bonding or mechanically attaching to substrate. **For use as a base/ply sheet only.**
Modified Sopra G	39" x 108' (3.5 sq.)	ASTM D4601	Fiberglass reinforced modified asphalt base sheet for bonding or mechanically attaching to substrate. **For use as a base/ply sheet only.**
Soprabase	39" x 99' (3 sq.)	ASTM D4601	Oxidized asphalt, polyester reinforced, sand-surface base sheet. **For use as a base/ply sheet only.**
Soprabase S	39" x 65' (2 sq.)	ASTM D4601	SBS modified bitumen, polyester reinforced, sand-surfaced base sheet. **For use as a base/ply sheet only.**
Soprabase TG	39" x 65' (2 sq.)	ASTM D4601	SBS modified bitumen, polyester reinforced, film-surfaced base sheet. **For use as a base/ply sheet only.**
Sopra IV	36" x 180' (5 sq.)	ASTM D2178 Type IV	Type IV, fiberglass reinforced, smooth surfaced ply sheet used in multi-ply systems and complies with ASTM and UL Standards. Applied in hot asphalt or cold adhesive.
Sopra VI	36" x 180' (5 sq.)	ASTM D2178 Type IV	Type IV, fiberglass reinforced, smooth surfaced ply sheet used in multi-ply systems and complies with ASTM and UL Standards. Applied in hot asphalt or cold adhesive.

Product	Dimensions	Test Specification	Product Description
Colvent Flam TG	39” x 49’ (1.5 sq.)	ASTM D6163	Fiberglass reinforced, modified bitumen membrane with 1” wide factory applied heat weld strips on back side and a plastic burn-off film surface.
Colvent Flam 180 TG	39” x 33’ (1 sq.)	ASTM D6164	Polyester reinforced, modified bitumen membrane with 1” wide factory applied heat weld strips on back side and a plastic burn-off film surface.
Sopralene Stick	39" x 33' (1 sq.)	ASTM D6164	Self-adhered, polyester reinforced membrane with a release film on the bottom and a sanded top.
Colphene Stick	39" x 33' (1 sq.)	ASTM D6164	Self-adhered, polyester reinforced membrane with a release film on the bottom and a sanded top.
Elastophene Sanded	39" x 49' (1.5 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Colphene Sanded	39" x 49' (1.5 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene Sanded 2.2	39" x 49' (1.5 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene Sanded 3.0	39" x 33' (1sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripped.
Elastophene HS	39” x 66’ (2 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants and sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene PS	39" x 49' (1.5 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film for heat weld bonding to the top side. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene PS 3.0	39" x 49' (1.5 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film for heat weld bonding to the top side. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene SP 2.2	39" x 49' (1.5 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Colphene SP 2.2	39" x 49' (1.5 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).

Product	Dimensions	Test Specification	Product Description
Elastophene SP 3.0	39" x 49' (1 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Colphene SP 3.0	39" x 49' (1 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Elastophene Flam	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane covered on both sides with a plastic burn-off film. Applied by heat welding.
Elastophene Flam 2.2	39" x 49' (1.5 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane covered on both sides with a plastic burn-off film. Applied by heat welding.
Elastophene Flam HS	39” x 33’ (1 sq.)	ASTM D6162	Woven fiberglass/polyester composite reinforced modified bitumen membrane with fire retardants and plastic burn-off film on both sides. Applied by heat welding.
Elastophene HS 62	39” x 33’ (1 sq.)	ASTM D6162	Woven fiberglass/polyester composite reinforced modified bitumen membrane with sanded surface on both sides. Applied in hot asphalt, cold adhesive.
Elastophene 180 Sanded	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Colphene 180 Sanded	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene 180 PS	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a sanded bottom and a plastic burn-off film on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Colphene 180 PS	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a sanded bottom and a plastic burn-off film on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene Stick	39" x 49' (1.5 sq.)	ASTM D6163	Self-adhered, sanded surfaced, fiberglass reinforced membrane.
Sopralene 180 Sanded	39" x 33' (1 sq.) 39” x 26’ (¾ sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.

Product	Dimensions	Test Specification	Product Description
Sopralene 250 Sanded	39" x 33' (1 sq.) 39” x 26’ (¾ sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Sopralene 180 Sanded 2.2	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt or cold adhesive.
Sopralene 180 PS	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the top and sanded on the bottom.
Sopralene 180 PS 2.2	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a sanded bottom and a plastic burn-off film on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Sopralene 180 SP 3.5	39” x 33’ (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Colphene 180 SP 3.5	39” x 33’ (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene 180 SP 3.0	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top.
Sopralene 250 SP	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top.
Soprafix Base 610	39" x 30’ (1 sq.)	ASTM D6162	Composite reinforced modified bitumen membrane with a film surface. Applied by mechanical attachment.
Soprafix Base 611	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a film surface. Applied by mechanical attachment.
Soprafix Base 621	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a sanded surface. Applied by mechanical attachment.
Soprafix Base 630	39” x 33’ (1 sq.)	ASTM D6162	Composite reinforced modified membrane with a film surface. Applied by mechanical attachment.
Soprafix [S]	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a film surface on both sides. Applied by mechanical attachment.
Soprafix Base 612	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a film surface on both sides. Applied by mechanical attachment.

Product	Dimensions	Test Specification	Product Description
Soprafix [F]	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a film surface on both sides. Applied by mechanical attachment.
Soprafix Base 613	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a film surface on both sides. Applied by mechanical attachment.
Soprafix [X]	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a film surface on both sides. Applied by mechanical attachment.
Soprafix Base 614	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a film surface on both sides. Applied by mechanical attachment.
Soprafix	39” x 33’ (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a 4-inch or 5-inch wide side lap with a plastic burn-off film on the bottom and sanded on the top. Applied by mechanical attachment. Lap heat welded or sealed with an approved cold adhesive.
Soprafix Base 622	39” x 33’ (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a 4-inch or 5-inch wide side lap with a plastic burn-off film on the bottom and sanded on the top. Applied by mechanical attachment. Lap heat welded or sealed with an approved cold adhesive.
Soprafix-e	39” x 33’ (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a 5-inch wide side lap with a self-adhering compound and release film and sanded on the bottom and top surfaces. Applied by mechanical attachment. Lap self-adhered or sealed with approved cold adhesive.
Soprafix Base 641	39” x 33’ (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a 5-inch wide side lap with a self-adhering compound and release film and sanded on the bottom and top surfaces. Applied by mechanical attachment. Lap self-adhered or sealed with approved cold adhesive.
Sopralene Flam Stick	39" x 33' (1 sq.)	ASTM D6164	Self-adhered, polyester reinforced membrane with a release film on the bottom and a plastic burn-off film on the top.
Sopralene Flam 180	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced SBS modified bitumen membrane, both sides covered with a plastic burn-off film. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).

Product	Dimensions	Test Specification	Product Description
Colphene Flam 180	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced SBS modified bitumen membrane, both sides covered with a plastic burn-off film. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam 250	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced SBS modified bitumen membrane, both sides covered with a plastic burn-off film. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Alsan RS 222 Primer	Various	Proprietary	Two-component, rapid curing PMMA acrylic primer
Alsan RS 276 Primer	Various	Proprietary	Two-component, rapid curing PMMA acrylic primer
Alsan RS 233 Self-Leveling Mortar	Various	Proprietary	Two-component surfacing composed of Alsan RS 223 Powder and Alsan RS 210 Low Odor Resin.
Alsan RS 263 LO Self Leveling Mortar	Various	Proprietary	Two-component surfacing composed of Alsan RS 223 Powder and Alsan RS 240 LO resin.
Alsan RS 281 Finish	Various	Proprietary	Two-component, rapid curing, PMMA acrylic clear finish resin.
Alsan RS 287 Color Finish Base	Various	Proprietary	Rapid curing, PMMA base resin.
Alsan RS 289 Textured Base	Various	Proprietary	Rapid curing, PMMA aggregated trafficable surface finish resin.
Alsan RS Deco Chips	Various	Proprietary	Polymer flat, pigmented, flakes used as a textured and decorative surfacing finish.
Elastocol 500	Various	ASTM D41	Asphalt primers.
Elastocol Stick	Various	ASTM D41	Asphalt primers.
Elastocol Stick Zero	Various	ASTM D41	Asphalt primers.
High Velocity® Insulation Adhesive III (HVIA-III)	4 dual cartridges per carton	Proprietary	Two part elastomeric urethane foam adhesive.
High Velocity® Insulation Adhesive III – Green	4 dual cartridges per carton	Proprietary	Two part elastomeric urethane foam adhesive.
High Velocity Insulation Adhesive PG	5 gallon, 50 gallon	Proprietary	Two part elastomeric urethane foam adhesive.

Product	Dimensions	Test Specification	Product Description
Duotack	Dual cartridges, 5 gallon, 50 gallon	Proprietary	Two part elastomeric urethane foam adhesive.
Duotack Neo	Dual cartridges, 5 gallon, 50 gallon	Proprietary	Two part polyurethane foam adhesive.
COLPLY Adhesive	5 gallon, 55 gallon, 350 gallon tote	Proprietary	Polymer modified cold process membrane adhesive.
COLPLY Modified Adhesive	5 gallon, 55 gallon, 350 gallon tote	Proprietary	Elastomeric bitumen based cold adhesive.
COLPLY EF Adhesive	5 gallon	Proprietary	Solvent free, polymeric adhesive.
Sopravap'r	45" x 133'	Various	A self-adhering air/vapor barrier membrane applied direct to deck for use in steel deck assemblies, composed of a SBS modified bitumen adhesive bottom layer and a tri-laminated woven polyethylene top layer.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam-II, ACFoam-III	Polyisocyanurate foam insulation	Atlas Roofing Corporation
ISO 95+ GL	Polyisocyanurate foam insulation	Firestone Building Products Company, LLC
DensDeck, DensDeck Prime	Water resistant gypsum board	Georgia Pacific Gypsum LLC
M-Shield	Polyisocyanurate foam insulation	SOPREMA, Inc.
H-Shield, H-Shield CG	Polyisocyanurate foam insulation	Hunter Panels LLC
ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR, ENRGY 3 AGF	Polyisocyanurate foam insulation	Johns Manville Corp.
Ultra-Max, Multi-Max FA-3	Polyisocyanurate foam insulation	RMax Operating, LLC
SECUROCK Gypsum-Fiber Roof Board, SECUROCK Cement Roof Board	Gypsum board	USG Corp.
Sopraboard	Mineral fortified asphaltic cored coverboard	SOPREMA, Inc.
Sopra-ISO s, Sopra-ISO+ s	Polyisocyanurate foam insulation	SOPREMA, Inc.
Sopra-ISO x, Sopra-ISO+ x	Polyisocyanurate foam insulation	SOPREMA, Inc.
Sopra-ISO r, Sopra-ISO+ r	Polyisocyanurate foam insulation	SOPREMA, Inc.
EnergyGuard POLYISO Insulation, EnergyGuard Ultra POLYISO Insulation	Polyisocyanurate foam insulation	GAF
DEXcell Glass Mat Roof Board, DEXcell FA Glass Mat Roof Board, DEXcell Cement Roof Board	Gypsum board	National Gypsum Company
SopraRock DD, SopraRock DD Plus	Mineral wool insulation	SOPREMA, Inc.
TopRock DD, TopRock DD Plus	Mineral wool insulation	Roxul, Inc.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	SOPREMA #12 Fastener, #14 Fastener, #15 Fastener	Fasteners for membrane or insulation attachment to wood, steel or concrete decks.		SOPREMA, Inc.
2.	Dekfast 12 Fastener, 14 Fastener, 15 HS Fastener	Insulation fastener		SFS Intec, Inc.
3.	OMG 3" Galvalume Steel Plate	Galvalume stress plate.	3" round	OMG, Inc.
4.	#12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip	Insulation fastener.		OMG, Inc.
5.	Trufast #14 HD Fastener	Insulation fastener for wood, steel and concrete.		Altenloh, Brinck & Co. U.S., Inc.
6.	Trufast #15 EHD Fastener	Insulation fastener for wood, steel and concrete.		Altenloh, Brinck & Co. U.S., Inc.
7.	Trufast 3" Metal Insulation Plate	Galvalume AZ50 steel plate	3" round	Altenloh, Brinck & Co. U.S., Inc.
8.	Dekfast Galvalume Steel 3" Round	Galvalume AZ50 steel plate	3" round	SFS Intec, Inc.
9.	SOPREMA 3" Round Insulation Plate	Stress plate	3" diameter	SOPREMA, Inc.
10.	Soprafix 2-3/8" SB Stress Plate	Stress plate	2-3/8" diameter	SOPREMA, Inc.
11.	SOPREMA #12 DP Fastener, SOPREMA #14 MP Fastener, SOPREMA #15 HD Fastener	Insulation and membrane fasteners		SOPREMA, Inc.
12.	Dekfast Galvalume Steel Round 2-3/8" 20-Ga Barbed Plate	Galvalume AZ55 steel barbed plate	2.37" Round	SFS Intec, Inc.
13.	Trufast 2" Barbed Metal Seam Plate	Galvalume steel stress plate	2" Round	Altenloh, Brinck & Co. U.S., Inc.
14.	Trufast 2.4" Barbed Metal Seam Plate	Galvalume steel stress plate	2.4" Round	Altenloh, Brinck & Co. U.S., Inc.
15.	SOPREMA 2" Seam Plate	Stress plate	2" diameter	SOPREMA, Inc.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
16.	SOPREMA 3" Metal Insulation Plate	Stress plate	3” diameter	SOPREMA, Inc.
17.	Trufast 2.4” Scoop Seam Plate	Galvalume steel stress plate	2.4” Round	Altenloh, Brinck & Co. U.S., Inc.
18.	SOPREMA 2.4” Seam Plates	Galvalume steel stress plate	2.4” Round	SOPREMA, Inc.
19.	OMG Heavy-Duty	Insulation fastener for wood, steel and concrete.		OMG, Inc.
20.	OMG 2-3/8” Barbed XHD Plate	Galvalume stress plate	2-3/8” Round	OMG, Inc.
21.	AccuTrac Flat Bottom	Aluminized square stress plate	3” square	OMG, Inc.
22.	Trufast #12 DP Fastener	Insulation fastener for wood and steel.		Altenloh, Brinck & Co. U.S., Inc.

APPROVED SURFACING/COATING OPTIONS:

TABLE 4

Chosen components must be applied according to manufacturer's application instructions. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

System Number	Manufacturer	Application
1.	SOPREMA, Inc.	Alsan RS 281 Finish applied at a rate of 0.74 gal. per 100 ft^2 for smooth surfaced or 1.23 gal./sq. for aggregated surfaces.
2.	SOPREMA, Inc.	Alsan RS 233 Self-Leveling Mortar applied at a rate of 1.8 gal. per 100 ft^2. Optional dried quartz aggregate applied at a rate of 100 lbs. per 100 ft^2 into wet Alsan RS 233 Self-Leveling Mortar. Optional finish coat of Alsan RS 281 Finish applied at a rate of 0.74 gal. per 100 ft^2.
3.	SOPREMA, Inc.	Alsan RS 263 LO Self Leveling Mortar applied at a rate of 1.8 gal. per 100 ft^2. Optional dried quartz aggregate applied at a rate of 100 lbs. per 100 ft^2 into wet Alsan RS 263 LO Self-Leveling Mortar. Optional finish coat of Alsan RS 281 Finish applied at a rate of 0.74 gal. per 100 ft^2.
4.	SOPREMA, Inc.	Alsan RS 230 Field applied at 2.6 gal. per 100 ft^2. Finish coat of Alsan RS 287 Color Finish Base applied at 1.2 gal. per 100 ft^2 with optional Alsan RS Deco Chips applied at 1.3 lbs. per 100 ft^2 embedded into wet top coat
5.	SOPREMA, Inc.	Alsan RS 233 Self-Leveling Mortar applied at 8.7 gal. per 100 ft^2. Finish coat of Alsan RS 287 Color Finish Base applied at 1.2 gal. per 100 ft^2 with optional Alsan RS Deco Chips applied at 1.3 lbs. per 100 ft^2embedded into wet top coat.
6.	SOPREMA, Inc.	Alsan RS 260 LO Field applied at 2.6 gal. per 100 ft^2. Finish coat of Alsan RS 287 Color Finish Base applied at 1.2 gal. per 100 ft^2 with optional Alsan RS Deco Chips applied at 1.3 lbs. per 100 ft^2 embedded into wet top coat.
7.	SOPREMA, Inc.	Alsan RS 263 LO Self-Leveling Mortar applied at 8.7 gal. per 100 ft^2. Optional finish coat of Alsan RS 287 Color Finish Base applied at 1.2 gal. per 100 ft^2 with optional Alsan RS Deco Chips applied at 1.3 lbs. per 100 ft^2 embedded into wet top coat.
8.	SOPREMA, Inc.	Alsan RS 233 Self-Leveling Mortar applied at 8.7 gal. per 100 ft^2. Optional finish coat of Alsan RS 289 Textured Base applied at 3.2 gal. per 100 ft^2.
9.	SOPREMA, Inc.	Alsan RS 230 Field applied at 2.6 gal. per 100 ft^2. Finish coat of Alsan RS 289 Textured Base applied at 3.2 gal. per 100 ft^2 with optional Alsan RS Deco Chips applied at 1.3 lbs. per 100 ft^2 embedded into wet top coat.
10.	SOPREMA, Inc.	Alsan RS 287 Color Finish Base applied at 1.2 gal. per 100 ft^2.
11.	SOPREMA, Inc.	Alsan RS 289 Textured Base applied at 3.2 gal. per 100 ft^2.

EVIDENCE SUBMITTED:

Test Agency/Identifier	Report	Name	Date
Factory Mutual Research Corp.	3002351	FM 4470	02/28/03
	3023458	FM 4450	07/18/06
	3024311	FM 4470	11/01/06
	3028410	FM 4470	02/19/07
	3026964	FM4470	07/25/07
	3034124	FM 4470	02/23/09
	3036182	FM 4470	07/31/09
	3035625	FM 4470	09/17/10
	3042559	FM 4470	10/18/11
	3044801	FM 4470	02/27/12
	3045101	FM 4470	11/05/12
	3046765	FM 4470	02/15/13
	3047439	FM 4470	07/22/13
	3046941	FM 4470	12/19/13
	3049322	FM 4470	01/17/14
	3048085	FM 4470	02/07/14
	3051408	FM 4470	08/13/14
	3047351	FM 4470	10/09/14
	3053841	FM 4470	03/27/15
	3051109	FM 4470	05/11/15
	RR201064	FM 4470	05/15/15
	RR201595	FM 4470	07/25/15
	RR202234	FM 4470	08/13/15
	RR202938	FM 4470	10/20/15
	RR203007	FM 4470	12/14/15
	3054633	FM 4470	12/18/15
	RR203650	FM 4470	12/18/15
	RR203157	FM 4470	01/19/16
	RR203472	FM 4470	02/05/16
	3053475	FM 4470	02/11/16
Underwriters Laboratories	R11436	UL 790	07/29/16
Trinity | ERD	2752.02LAB.05.02-1	TAS 114	05/24/02
	02843.02.05-2	TAS 117	02/10/05
	2779.11.05-R1	TAS 114	04/18/07
	S30440.03.10-2-R2	TAS 114	06/01/10
	02848.04.05-R1	TAS 114	10/19/10
	S11440.11.10-4	ASTM D2178	11/17/10
	S35860.12.11-2	ASTM D4601	12/12/11
	S39500.02.12	Physical Properties	02/23/12
	S39320.01.12-R1	TAS 114	05/24/12
	S11440.12.10-1-R1	ASTM D6163	06/07/12
	S39970.07.12-2	ASTM D6164	07/12/12
	S35860.05.12-1-R2	ASTM D6163	02/14/13
	S35860.05.12-3-R1	ASTM D6164	03/14/13

EVIDENCE SUBMITTED: (CONTINUED)

Test Agency/Identifier	Report	Name	Date
Trinity | ERD	S45340.10.13	TAS 114	10/02/13
	S45010.02.14	ASTM D6506	02/07/14
	S45520.11.13-R2	Physical Properties	03/26/14
	S47170.05.14-1	TAS 114	05/12/14
	S32700.12.10-R2	ASTM D6162	07/07/14
	S11440.11.10-3-R2	ASTM D4601/TAS 117(B)	08/26/14
	S43400.08.14-6	ASTM D6164	08/26/14
	S35860.05.12-2-R3	ASTM D6164	08/28/14
	S44110.09.14-7C	ASTM D6164	09/02/14
	S44110.09.14-1	ASTM D6162	09/08/14
	S441120.09.14-7A	ASTM D4601	09/08/14
	S43400.08.14-4-R1	ASTM D6163	10/24/14
	S43210.11.14	ASTM D1876	11/10/14
	S32840.06.10-R1	TAS 117 (B)	12/11/14
	S47160.01.14-R1	TAS 114 (H)	12/11/14
	S35860.12.11-1-R1	ASTM D2178	12/12/14
	S35860.09.12-R2	ASTM D6163	12/12/14
	S39970.07.12-R1	ASTM D6162	12/12/14
	S44110.01.15-4A-R3	ASTM D6164	05/01/15
	SOPC-S42600.08.15-R2	Physical Properties	03/21/16
	S41370.07.12-R1	TAS 114	04/27/16
PRI Construction Materials Technologies, LLC	SOP-010-02-01.03	TAS-138	07/26/11
	SOP-043-02-01	ASTM D4601	02/27/12
	SOP-042-02-01	ASTM D4601	02/27/12
	SOP-041-02-01	ASTM D2178	02/27/12
	SOP-040-02-01	ASTM D2178	02/27/12
	SOP-049-02-01	ASTM D1644 /D2196	05/31/12
	SOP-050-02-01	ASTM D3019	07/12/12
	SOP-056-02-01	Physical Properties	09/12/12
	SOP-071-02-01	Physical Properties	02/12/16

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

Engineer/Agency	Identifier	Assemblies	Date
Robert Nieminen, P.E.	Signed/Sealed Calculations	B(2), B(3), C(2), C(3), C(4), C(7), D(1), D(8), D(12)	04/29/16
FM Approval Deck Limitations	N/A	B(1), B(4), B(5), B(6), B(7), C(1), C(5), C(6), D(2), D(3), D(4), D(5), D(6), D(7), D(9), D(10), D(11), D(13), D(14)	01/01/13

APPROVED ASSEMBLIES:

Membrane Type: Liquid Applied Membrane

Deck Type 3I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened 6" o.c. with Traxx/5 fasteners into ¼" steel supports spaced maximum 6 ft. o.c. Deck side laps are attached with Traxx/1 fasteners spaced max. 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type B(1): Optional vapor barrier followed by base layer of insulation mechanically attached, top layer adhered with approved adhesive.

All General and System Limitations apply.

Vapor Barrier: Sopravap'r, self-adhered to the top flanges of the steel deck.

(Optional)

One or more layers of any of the following insulations.

Base Insulation Layer (Minimum 2 layers)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft2**
H-Shield, H-Shield CG, M-Shield, Sopra-ISO r, Sopra-ISO+ r, ACFoam-II, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, Multi-Max FA-3, UltraMax, Sopra-ISO x, Sopra-ISO+ x, ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, EnergyGuard POLYISO Insulation		
Minimum 1.5" thick	**6, 11 (#15)**	**1:1.78 ft^2**

Note: Base layer shall use minimum two layers of insulation panels listed. Insulation panel joints shall be staggered, mechanically attached with fasteners and density described above. Alternately the first layer of insulation may be mechanically fastened as above and the second layer adhered with Duotack or Duotack Neo applied in ½" to ¾" wide ribbons spaced maximum 12" o.c. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Sopraboard		
Minimum 1/8" thick	**N/A**	**N/A**
DEXcell FA Glass Mat Roof Board, DensDeck, SECUROCK Gypsum-Fiber Roof Board		
Minimum 1/4" thick	**N/A**	**N/A**
DEXcell Cement Roof Board		
Minimum 7/16" thick	**N/A**	**N/A**

Note: All insulations shall be adhered with Duotack or Duotack Neo applied in ½" to ¾" wide ribbons spaced maximum 12" o.c. Refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Base Sheet:	One or two plies of Sopra G, Modified Sopra G, Soprabase, Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS* or Sopralene 250 Sanded, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-25 lbs./sq. or in COLPLY EF Adhesive at 1.5-2.5 gal./sq. Or One layer of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 250 SP, Colvent Flam TG*, Colvent Flam 180 TG*, torch-applied. Or One layer of Elastophene Stick, Sopralene Stick, Colphene Stick, Elastophene Flam Stick*, Sopralene Flam Stick* self-adhered. *Requires torch-applied ply or cap membrane.
Ply Sheet: (Optional)	One layer of Sopra G, Modified Sopra G, Soprabase, Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or in COLPLY EF Adhesive at 1.5-2.5 gal./sq. Or One layer of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied. Or One layer of Elastophene Stick, Sopralene Stick or Colphene Stick, self-adhered.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1.0 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-52.5 psf. (See General Limitation #7)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel fastened with puddle welds spaced 6" o.c. to supports spaced maximum 6' o.c. Deck side laps are fastened max. 24" o.c. with Tek/1 fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type B(2): Optional vapor barrier followed by base layer of insulation mechanically attached, top layer adhered with approved adhesive, roof cover fully adhered.

All General and System Limitations apply.

Vapor Barrier: Sopravap'r, self-adhered to the top flanges of the steel deck.

(Optional)

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, Sopra-ISOs or ENRGY 3 Minimum 2" thick	**4 (#12 or #14) with 21, 4 (#12) or 19 with 3, 2 (#12 or #14) with 8, 22, 11 (#12) or 5 or 11 (#14) with 7 or 9 or 1 (#12 or #14) with 16**	**1:2 ft^2**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
SECUROCK Gypsum-Fiber Roof Board Minimum 3/8" thick	**N/A**	**N/A**
SECUROCK Cement Roof Board Minimum ½" thick	**N/A**	**N/A**

Note: All insulations shall be adhered with hot asphalt full mop applied at a rate of 25 lbs./sq. or with High Velocity® Insulation Adhesive III (HVIA-III), High Velocity® Insulation Adhesive III – Green, High Velocity Insulation Adhesive PG, Duotack, Duotack Neo, Millennium One Step Foamable Adhesive, Millennium One Step Green Foamable Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive applied in continuous ribbons maximum spacing of 12" o.c. Refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Base Sheet:	Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or in COLPLY EF Adhesive at 1.5-2.5 gal./sq. Or Elastophene Flam HS*, Elastophene Flam 2.2*, Elastophene Flam*, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied. Or One layer of Sopralene Stick, Colphene Stick, Elastophene Flam Stick* or Sopralene Flam Stick* self-adhered. *Requires torch-applied ply sheet.
Ply Sheet: (Optional)	Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or in COLPLY EF Adhesive at 1.5-2.5 gal./sq. Or One layer of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied. Or One layer of Elastophene Stick, Sopralene Stick or Colphene Stick, self-adhered.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1.0 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-60 psf. (See General Limitation #7.)

Membrane Type: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel fastened to structural supports spaced 6' o.c. with Tek/5 screws in every flute spaced 6" o.c. Deck side laps are fastened max. 24" o.c. with Tek/1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type B(3): Insulation layer mechanically attached followed by vapor barrier and insulation layers adhered with approved adhesive, roof cover fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Separation Sheet: (Optional) Sopravap'r, self-adhered.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board		
Min. 0.625-inch thick	**5 with 7 or 11 (#14) with 16**	**1:2 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Vapor Barrier: Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.

Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
EnergyGuard POLYISO Insulation or ENRGY 3 CGF		
Minimum 2" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	**N/A**	**N/A**

Note: Middle and Top insulation shall be adhered with High Velocity Insulation Adhesive PG (HVIA-PG), Millennium PG-1 Low Viscosity Insulation Adhesive, Duotack or Duotack Neo applied in continuous ¾" to 1" wide ribbons at a maximum spacing of 12" o.c. Refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate

Base Sheet:	Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Elastophene Flam HS*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250* or Sopralene 250 SP, torch-applied. Or Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded adhered in COLPLY EF Adhesive at a rate of 1.5 gal./sq. or adhered in hot asphalt at 25 lbs./sq. or Sopra-G, Modified Sopra-G, Sopra IV, Sopra VI or Soprabase applied in hot asphalt at 25 lbs./sq. *Requires torch-applied ply sheet
Ply Sheet: (Optional)	Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied. Or Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded adhered in COLPLY EF Adhesive at a rate of 1.5 gal./sq. or adhered in hot asphalt at 25 lbs./sq. or Sopra-G, Modified Sopra-G, Sopra IV, Sopra VI or Soprabase applied in hot asphalt at 25 lbs./sq.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1.0 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-75 psf. (See General Limitation #7)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel fastened to ¼" thick structural supports spaced 6' o.c. with Traxx/5 fasteners spaced 6" o.c. Deck side laps fastened with Traxx/1 fasteners spaced at 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type B(4): Insulation layer mechanically attached followed by vapor barrier and insulation layers adhered with approved adhesive, roof cover fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ½" thick	**5, 6, 11 (#14 MP or #15 HD)**	**1:2 ft²**

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Primer: (Optional) Elastocol 500, Elastocol Stick Zero or Elastocol Stick at a rate of 0.5 gal./sq.

Vapor Barrier: Sopravap'r, Elastophene Stick, Sopralene Stick or Colphene Stick, self-adhered over primed gypsum board.
Or
Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied over primed gypsum board.
Or
Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded, Elastophene PS, Elastophene PS 3.0, Elastophene 180 PS, Colphene 180 PS, Sopralene 180 PS 2.2, adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY Adhesive, COLPLY Modified Adhesive at a rate of 1.5 gal./sq.

Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
H-Shield, H-Shield CG, M-Shield, Sopra-ISO r, Sopra-ISO+ r, ACFoam-II, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, Multi-Max FA-3, UltraMax, Sopra-ISO x, Sopra-ISO+ x, ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, EnergyGuard POLYISO Insulation		
Minimum 1.5" thick (flat or tapered)	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with Duotack or Duotack Neo applied in ½" to ¾" wide ribbons spaced 12" o.c. Refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet:	One or more layers of Soprabase, Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY EF Adhesive applied at a rate of 1.5 – 2 gal./sq. Or One layer of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, torch-applied. Or One layer of Elastophene Stick, Sopralene Stick, Colphene Stick, self-adhered to substrate primed with Elastocol Stick or Elastocol Stick Zero.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-82.5 psf. (See General Limitation #7)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel fastened to ¼" thick structural supports spaced 6' o.c. with Traxx/5 fasteners spaced 6" o.c. Deck side laps fastened with Traxx/1 fasteners spaced at 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type B(5): Base layer of insulation mechanically fastened, top layer adhered with approved adhesive.

All General and System Limitations apply.

Thermal Barrier: (Optional) Min. ¼" thick DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, DEXcell Glass Mat Roof Board, DEXcell Cement Roof Board or min. 7/16" thick DEXcell Cement Roof Board, loose-laid.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
H-Shield, M-Shield, Sopra-ISO r, ACFoam-II, Sopra-ISO s, Multi-Max FA-3, UltraMax, Sopra-ISO x, Sopra-ISO+ x (flat or tapered)		
Minimum 2 thick	**11 (#14 MP or #15 HD), 5 or 6**	**1:1.6 ft²**

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with Duotack or Duotack Neo applied in ½" to ¾" wide ribbons spaced 12" o.c. Refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: One or more layers of Soprabase, Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY EF Adhesive applied at a rate of 1.5 – 2 gal./sq.
Or
One layer of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, torch-applied.
Or
One layer of Elastophene Stick, Sopralene Stick, Colphene Stick, self-adhered to substrate primed with Elastocol Stick or Elastocol Stick Zero.

Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-82.5 psf. (See General Limitation #7)

Membrane:	Liquid Applied Membrane
Deck Type 2I:	Steel, Insulated
Deck Description:	18-22 ga., Type B, Grade 33 steel deck fastened to supports spaced maximum deck spans of 6 ft. o.c. with two Traxx/5 fasteners and ¾" washers spaced 6" o.c. Deck side laps are attached with Traxx/1 screws spaced 12" o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**
System Type B(6):	Base layer of insulation mechanically fastened, top layer adhered with approved adhesive.

All General and System Limitations apply.

Vapor Barrier: (Optional)	Sopravap'r, self-adhered to the top flanges of the steel deck.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ISO 95+ GL, ACFoam-II, Sopra-ISO s, H-Shield, M-Shield, Sopra-ISO r, ENRGY 3 Minimum 1.5" thick	**1, 2, 4 (14), 6, 11(#15), 19**	**1:1 ft²**

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Cement Roof Board Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with OlyBond 500 Adhesive Fastener, Insta-Stick, Millennium One Step Foamable Adhesive, Millennium One Step Green Foamable Adhesive or Millennium PG-1 Low Viscosity Insulation Adhesive, High Velocity® Insulation Adhesive III (HVIA-III), High Velocity® Insulation Adhesive III –Green, High Velocity® Insulation Adhesive PG, Duotack or Duotack Neo applied in continuous ½" to ¾" wide ribbons spaced 12" o.c. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer:	Alsan RS 276 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-82.5 psf. (See General Limitation #7.)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck fastened to supports spaced maximum deck spans of 6 ft. o.c. with two Traxx/5 fasteners and ¾" washers spaced 6" o.c. Deck side laps are attached with Traxx/1 screws spaced 12" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type B(7): Base layer of insulation mechanically fastened, top layer adhered with approved adhesive.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered to the top flanges of the steel deck.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft2
ISO 95+ GL, ACFoam-II, Sopra-ISO s, H-Shield, M-Shield, Sopra-ISO r, ENRGY 3		
Minimum 1.5" thick	**1, 2, 4 (14), 6, 11(#15), 19**	**1:1 ft²**

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Cement Roof Board		
Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with OlyBond 500 Adhesive Fastener, Insta-Stick, Millennium One Step Foamable Adhesive, Millennium One Step Green Foamable Adhesive or Millennium PG-1 Low Viscosity Insulation Adhesive, High Velocity® Insulation Adhesive III (HVIA-III), High Velocity® Insulation Adhesive III –Green, High Velocity® Insulation Adhesive PG, Duotack or Duotack Neo applied in continuous ½" to ¾" wide ribbons spaced 12" o.c. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: Alsan RS 276 Primer applied at a rate of 1-1.5 gal./sq.

Base Coat: Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.

Reinforcement: Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.

Top Coat: Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.

Surfacing: (Optional) Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.

Maximum Design Pressure: -127.5 psf. (See General Limitation #7.)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened 6" o.c. with Traxx/5 fasteners to supports spaced maximum deck spans of 6 ft. o.c. Deck side laps are attached with Traxx/1 screws spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(1): All layers of insulation simultaneously attached.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered to the top flanges of the steel deck.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft2
ACFoam-II, Sopra-ISO s, ACFoam-III, Sopra-ISO+ s, EnergyGuard POLYISO Insulation, EnergyGuard Ultra POLYISO Insulation, ENRGY 3, ENRGY 3 FR, ENRGY 3 AGF, ENRGY 3 CGF, H-Shield, Sopra-ISO r, M-Shield, H-Shield CG, Sopra-ISO+ r, Multi-Max FA-3, Sopra-ISO x (flat or tapered)		
Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft2
SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.5" thick	**4 (#12 or #14) with 21, 4 (#12) or 19 with 3, 2 (#12 or #14) with 8, 22, 11 (#12) or 5 or 11 (#14) with 7 or 9 or 1 (#12 or #14) with 16**	**1:1.78 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: (Optional) Coverboard is primed with an approved ASTM D41 asphalt primer at a rate of 100-150 ft^2/gal.

Base Sheet: Elastophene Flam HS*, Elastophene Flam 2.2*, Elastophene Flam*, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied.
*Requires torch-applied ply sheet.

Ply Sheet: (Optional) Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Soprabase, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or in COLPLY EF Adhesive at 1.5-2.5 gal./sq.
Or

Ply Sheet: (Optional) (continued)	Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1.0 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-52.5 psf. (See General Limitation #7.)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened 6" o.c. with Traxx/5 fasteners to supports spaced maximum deck spans of 6 ft. o.c. Deck side laps are attached with Traxx/1 screws spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(2): All layers of insulation simultaneously attached.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Any Approved Polyisocyanurate, EPS or XPS Insulation listed in Table 2 Minimum 1" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard Minimum 1/8" thick	**1, 2, 4, 5, 6**	**1:2 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: (Optional) Elastocol 500, Elastocol Stick, Elastocol Stick Zero applied at a rate of 1 gal./sq., to top surface of any insulation, base or ply sheet prior to application of next layer.

Base Sheet: One or more layers of Sopralene 180 Sanded, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in COLPLY EF Adhesive at 1.5-2.5 gal./sq.

Or

Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 250*, Sopralene 250 SP, Colvent Flam 180 TG*, torch-applied.
*Requires torch-applied ply sheet.

Ply Sheet: (Optional)	One or more plies of Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded, Sopralene 180 Sanded 2.2 or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or in COLPLY EF Adhesive at a rate of 1.5 gal./sq. Or Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1.0 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-67.5 psf. (See General Limitation #7.)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck fastened 6" o.c. with Traxx/5 fasteners to supports spaced maximum deck spans of 6 ft. o.c. Deck side laps are attached with Traxx/1 screws spaced 24" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(3): All layers of insulation simultaneously attached.

All General and System Limitations apply.

Vapor Barrier: Sopravap'r, self-adhered to the top flanges of the steel deck.

(Optional)

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, Sopra-ISO s, ACFoam-III, Sopra-ISO+ s, EnergyGuard POLYISO Insulation, EnergyGuard Ultra POLYISO Insulation, ENRGY 3, ENRGY 3 FR, ENRGY 3 AGF, ENRGY 3 CGF, H-Shield, Sopra-ISO r, M-Shield, H-Shield CG, Sopra-ISO+ r, Multi-Max FA-3, Sopra-ISO x (flat or tapered)		
Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.375" thick	**6 or 11(#15) with 7 or 16**	**1:1.33 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Elastophene Flam HS*, Elastophene Flam 2.2*, Elastophene Flam*, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied.

*Requires torch-applied Ply or Cap.

Ply Sheet: (Optional) Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied.

Or

Elastophene Sanded, Colphene Sanded, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Sopralene 180 Sanded or Sopralene 250 Sanded applied in hot asphalt at 25 lbs./square or in COLPLY EF Adhesive at 1.5 – 2.0 gal./sq.

Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-75 psf. (See General Limitation #7.)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. Type B, Grade 80 steel fastened 6" o.c. with Traxx/5 fasteners to steel supports spaced maximum 5 ft. o.c. Deck side laps fastened with Traxx/1 fasteners spaced at 20" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(4): All layers of insulation simultaneously attached.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Any Approved Polyisocyanurate Insulation listed in Table 2 (flat or tapered) loose laid.		
Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard		
Minimum 1/8" thick	**2, 4, 6 (#15) or 11 (#15)**	**1:1.25 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: (Optional) Elastocol 500, Elastocol Stick, Elastocol Stick Zero applied at a rate of 1 gal./sq., to top surface of any insulation, base or ply sheet prior to application of next layer.

Base Sheet: One or more layers of Elastophene Sanded, Colphene Sanded, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Sopralene 180 Sanded, Sopralene 250 Sanded, adhered in COLPLY EF Adhesive at 1.5-2.5 gal./sq.

Or

Elastophene Flam*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.
*Requires torch-applied ply sheet.

Ply Sheet: (Optional)	One or more layers of Elastophene Sanded, Colphene Sanded, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Sopralene 180 Sanded, Sopralene 250 Sanded, adhered in COLPLY EF Adhesive at 1.5-2.5 gal./sq. Or Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1.0 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-90 psf. (See General Limitation #7.)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: Min. 18-22 ga., Type B, Grade 80 steel deck secured to min. ¼" thick supports spaced a max. 6' o.c. with Traxx/5 fasteners spaced a max. 6" o.c. Deck side laps are attached with Traxx/1 screws spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(5): All layers of insulation simultaneously attached.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck or DensDeck Prime Minimum .25" thick	**N/A**	**N/A**

Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
H-Shield, M-Shield, Sopra-ISO r, ACFoam-II, Sopra-ISO s, ISO 95+ GL, Multi-Max FA-3, Sopra-ISO x, ENRGY 3 Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum .5" thick	**5, 6 with 7; 11 (#14 or #15) with 16**	**1:1.33 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Sopralene 180 Sanded, Sopralene 250 Sanded adhered in COLPLY EF Adhesive at a rate of 1.5 gal./sq. or adhered in hot asphalt at 25 lbs./sq.
Or
Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP torch-applied.

Primer: (Optional) Alsan RS 222 Primer applied at a rate of 1.0 gal./sq.

Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-90 psf. (See General Limitation #7.)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-20 ga., Type B, Grade 80 steel deck fastened to min. ¼" thick steel structural supports spaced a maximum 6 ft. o.c. with Traxx/5 screws and ¾" diameter washers spaced maximum 6 in. o.c. Side laps are fastened with Traxx/1 screws spaced maximum 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(6): All layers of insulation simultaneously attached.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

One or more layers of any of the following insulations.

Base Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
H-Shield, ACFoam-II, M-Shield, Sopra-ISO r, Sopra-ISO s		
Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board		
Minimum ½" thick	**5 with 7; 11 (#14) with 16**	**1:1.33 ft²**
Minimum ½" thick	**5 with 7; 11 (#14) with 16**	**1:1 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Two or three plies of Sopra IV, Sopra VI or two plies of Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Sopralene 180 Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 PS*, Colphene 180 PS*, Sopralene 180 PS 2.2* or Sopralene 180 PS* adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or adhered in COLPLY Adhesive, COLPLY Modified Adhesive, COLPLY EF Adhesive at a rate of 1.5 gal./sq.

Base Sheet: (continued)	Or Two plies of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Elastophene Flam HS*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 250 SP, Colvent Flam TG*, Colvent Flam 180 TG*, torch-applied over coverboard primed with ASTM D41 primer at a rate of 100-150 ft^2/gal. Or One layer of Elastophene Stick, Sopralene Stick, Colphene Stick, Elastophene Flam Stick*, Sopralene Flam Stick* self-adhered. *Requires torch-applied ply sheet.
Ply Sheet: (Optional)	One ply of Sopra IV, Sopra VI or Elastophene Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene HS 62, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Sopralene 180 Sanded adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or adhered in COLPLY EF Adhesive at a rate of 1.5 gal./sq. Or One ply of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied over coverboard primed with ASTM D41 primer at a rate of 100-150 ft^2/gal. Or One layer of Elastophene Stick, Sopralene Stick or Colphene Stick self-adhered.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-157.5 psf. (fastener density of 1:1.33 ft^2) (See General Limitation #7) -172.5 psf. (fastener density of 1:1 ft^2) (See General Limitation #7)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck fastened to structural supports spaced a maximum 6 ft. o.c. with Traxx/5 screws and ¾" diameter washers spaced maximum 6 in. o.c. at each flute. Side laps are fastened with Traxx/1 screws spaced maximum 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(7): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
H-Shield, M-Shield, Sopra-ISO r Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	**5 with 7; 11 (#14) with 16**	**1:1 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Two or three plies of Sopra IV, Sopra VI or two plies of Elastophene HS 62, Elastophene Sanded 3.0, Elastophene HS, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Colphene 180 Sanded, Sopralene 180 Sanded, Sopralene 250 Sanded, applied in hot asphalt at a rate of 20-40 lbs./sq.

Or

Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.

Or

One layer of Sopralene Stick or Colphene Stick, self-adhered.

Primer: (Optional) Alsan RS 222 Primer applied at a rate of 1 gal./sq.

Base Coat: Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.

Reinforcement: Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.

Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-180 psf. (See General Limitation #7)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened to structural supports spaced a maximum of 6' o.c. with Tek/5 screws and spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 screws spaced maximum 24 in. o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**

System Type D(1): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
H-Shield, M-Shield, Sopra-ISO r Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One layer of Soprafix, Soprafix Base 622, Soprafix-e or Soprafix Base 641 fastened to the deck as described below:

Fastening: Attach base sheet using Trufast #15 EHD Fasteners or SOPREMA #15 HD Fasteners with Trufast 2.4" Barbed Metal Seam Plates or Dekfast 14 fasteners with Dekfast Galvalume Steel Round 2-3/8" 20-Ga Barbed Plates or SOPREMA #14 Fasteners with Soprafix 2-3/8" SB Stress Plates with row spacing at a maximum 35" o.c. The fasteners are spaced 12" o.c. in a 4" or 5" wide heat-welded base sheet side laps.

Ply Sheet: (Optional) One or more plies of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.

Primer: (Optional) Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.

Base Coat: Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.

Reinforcement: Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.

Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-67.5 psf. (See General Limitation #7)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 24 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(2): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (LWC)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete or Mearlcrete Lightweight Insulating Concrete		
Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard		
Minimum 1/8" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	**N/A**	**N/A**

Note: Top layer (other than LWC) shall have preliminary attachment, prior to the installation of the base sheet. Additional Insulation (other than LWC) shall be limited to maximum 1" total thickness and shall be applied over a barrier sheet to separate from the LWC. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Soprafix Base 611*, Soprafix Base 610*, Soprafix Base 630*, Soprafix, Soprafix Base 622, Soprafix [S]*, Soprafix Base 612*, Soprafix [F]*, Soprafix Base 613*, Soprafix [X]* or Soprafix Base 614* fastened to the deck as described below:
*Requires torch applied ply sheet.

Fastening #1:	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. in a 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of –67.5 psf. See General Limitation #7.)***
Fastening #2:	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. in a 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of –75 psf. See General Limitation #7.)***
Ply Sheet: (Optional)	Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 24 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(3): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard		
Minimum 1/8" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One layer of Soprafix Base 611*, Soprafix Base 610*, Soprafix, Soprafix Base 622, Soprafix [S]*, Soprafix Base 612*, Soprafix [F]*, Soprafix Base 613*, Soprafix [X]* or Soprafix Base 614* fastened to the deck as described below:
*Requires torch applied ply sheet.

Fastening #1: Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. in a 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of –67.5 psf. See General Limitation #7.)

Fastening #2:	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. in a 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of –75 psf. See General Limitation #7.)***
Ply Sheet: (Optional)	Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. (**See fastening options for steel gage**), Type B, Grade 33 ksi steel deck fastened to ¼" thick steel structural supports spaced a maximum of 62"- 72" o.c. (**see fastening options for support spans**) with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 24 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(4): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid. Minimum ½" thickness required if applying a vapor barrier.

Vapor Barrier: (Optional) An FM approved vapor barrier approved for use with torch-adhered, self-adhered, hot asphalt or cold applied may be applied to the deck or over the base insulation layer.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Sopraboard		
Minimum $^1/_8$" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One layer of Soprafix Base 621, Soprafix, Soprafix Base 622, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 Sanded or Sopralene 250 SP fastened to the deck as described below:

Fastening #1:	***(Min. 18-22 ga. Steel in max. 72" support span)*** Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide, torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of –67.5 psf. See General Limitation #7.)***
Fastening #2:	***(Min. 18-22 ga. Steel in max. 72" support span)*** Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide, torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -75 psf. See General Limitation #7.)***
Fastening #3:	***(Min. 18 ga. Steel in max. 72" support span; Min. 20 ga. Steel in max. 69" support span; Min. 22 ga. steel in max. 62" support span.)*** Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2" Seam Plates or SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of –112.5 psf. See General Limitation #7.)***
Ply Sheet: (Optional)	Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 ksi steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(5): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid. Minimum ½" thickness required if applying a vapor barrier.

Vapor Barrier: (Optional) An FM approved vapor barrier approved for use with torch-adhered, self-adhered, hot asphalt or cold applied may be applied to the deck or over the base insulation layer.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard		
Minimum 1/8" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One layer of Soprafix Base 621, Soprafix, Soprafix Base 622, Elastophene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 Sanded or Sopralene 250 SP fastened to the deck as described below:

Fastening #1: Attach base sheet using Trufast #14 HD Fasteners with Trufast 2" Barbed Metal Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -67.5 psf. See General Limitation #7.)

Fastening #2:	Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -75 psf. See General Limitation #7.)***
Fastening #3	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -97.5 psf. See General Limitation #7.)***
Fastening #4:	Attach base sheet using Trufast #14 HD or Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Trufast 2.4" Scoop Seam Plates or SOPREMA #14 MP or SOPREMA #15 HD Fasteners with SOPREMA 2" Seam Plates or SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -120 psf. See General Limitation #7.)***
Ply Sheet: (Optional)	Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Grade 80, Type B steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(6): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard		
Minimum 0.125" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One layer of Soprafix Base 611*, Soprafix Base 610*, Soprafix, Soprafix Base 622, Soprafix [S]*, Soprafix Base 612*, Soprafix [F]*, Soprafix Base 613*, Soprafix [X*] or Soprafix Base 614* fastened to the deck as described below:
*Requires torch applied ply sheet.

Fastening #1: Attach base sheet using Trufast #14 HD Fasteners with Trufast 2" Barbed Metal Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -67.5 psf. See General Limitation #7.)

Fastening #2:	Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -75 psf. See General Limitation #7.)***
Fastening #3:	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -120 psf. See General Limitation #7.)***
Ply Sheet: (Optional)	Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(7): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (LWC)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete or Mearlcrete Lightweight Insulating Concrete **Minimum 2.0" thick, Minimum 300 psi.**	**N/A**	**N/A**

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Multi-Max FA-3, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r, Sopra-ISO x, Sopra-ISO+ x, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus **Minimum 1.5" thick**	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard **Minimum 0.125" thick**	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board **Minimum 0.25" thick**	**N/A**	**N/A**

Note: Top layer (other than LWC) shall have preliminary attachment, prior to the installation of the base sheet. Additional Insulation (other than LWC) shall be limited to maximum 1" total thickness and shall be applied over a barrier sheet to separate from the LWC. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Soprafix Base 611*, Soprafix Base 610*, Soprafix Base 630*, Soprafix, Soprafix Base 622, Soprafix [S]*, Soprafix Base 612*, Soprafix [F]*, Soprafix Base 613*, Soprafix [X]* or Soprafix Base 614* fastened to the deck as described below:
*Requires torch applied ply sheet.

Fastening #1:	Attach base sheet using Trufast #14 HD Fasteners with Trufast 2" Barbed Metal Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -67.5 psf. See General Limitation #7.)***
Fastening #2:	Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -75 psf. See General Limitation #7.)***
Fastening #3:	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -120 psf. See General Limitation #7.)***
Fastening #4:	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -135 psf. See General Limitation #7.)***
Ply Sheet: (Optional)	Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened to structural supports spaced a maximum of 6' o.c. with Tek/5 screws and spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 screws spaced maximum 24 in. o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**

System Type D(8): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
H-Shield, M-Shield, Sopra-ISO r Minimum 1.5" thick	**N/A**	**N/A**

Note: Base layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One layer of Soprafix, Soprafix Base 622, Soprafix-e or Soprafix Base 641 fastened to the deck as described below:

Fastening #1: Attach Soprafix or Soprafix Base 622 using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates, Trufast 2.4" Barbed Metal Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2" Seam Plates or Dekfast 14 fasteners with Dekfast Galvalume Steel Round 2-3/8" 20-Ga Barbed Plates or SOPREMA #14 Fasteners with Soprafix 2-3/8" SB Stress Plates or OMG Heavy-Duty fasteners with OMG 2-3/8" Barbed XHD Plates with row spacing at a maximum 34" o.c. The fasteners are spaced 6" o.c. in a 4" or 5" wide heat-welded base sheet side laps.

Fastening #2: Attach Soprafix-e or Soprafix Base 641 using Trufast #15 EHD Fasteners or SOPREMA #15 HD Fasteners with Trufast 2.4" Barbed Metal Seam Plates or Dekfast 14 fasteners with Dekfast Galvalume Steel Round 2-3/8" 20-Ga Barbed Plates or SOPREMA #14 Fasteners with Soprafix 2-3/8" SB Stress Plates or OMG Heavy-Duty fasteners with OMG 2-3/8" Barbed XHD Plates with row spacing at a maximum 34" o.c. The fasteners are spaced 6" o.c. in a 4" or 5" wide heat-welded base sheet side laps.

Ply Sheet: (Optional) One or more plies of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP torch-applied.

Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-82.5 psf. (See General Limitation #7)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. Grade 80, Type B steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(9): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (LWC)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete or Mearlcrete Lightweight Insulating Concrete		
Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Multi-Max-3, H-Shield, M-Shield, Sopra-ISO r, Sopra-ISO x, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard		
Minimum 1/8" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	**N/A**	**N/A**

Note: Top layer (other than LWC) shall have preliminary attachment, prior to the installation of the base sheet. Additional Insulation (other than LWC) shall be limited to maximum 1" total thickness and shall be applied over a barrier sheet to separate from the LWC. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Soprafix [X] or Soprafix Base 614 fastened to the deck as described below:

Fastening: Attach base sheet using Trufast #15 EHD Fasteners and SOPREMA #15 HD Fasteners with Trufast 2.4" Scoop Seam Plates and SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps.

Ply Sheet:	Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-97.5 psf. (See General Limitation #7)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., **(See Fastening Options for Steel Grade)**, Type B steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**

System Type D(10): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard		
Minimum 1/8" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One layer of Soprafix Base 611*, Soprafix Base 610*, Soprafix, Soprafix Base 622, Soprafix [S]*, Soprafix Base 612*, Soprafix [F]*, Soprafix Base 613*, Soprafix [X]* or Soprafix Base 614* fastened to the deck as described below: *Requires torch applied ply sheet.

Fastening #1: **(*Grade 80 steel deck*)** Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps.

Fastening #2:	**(*Grade 33 steel deck*)** Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps.
Ply Sheet: (Optional)	One or more plies of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-112.5 psf. (See General Limitation #7.)

Membrane: Liquid Applied Membrane

Deck Type 4I: Steel, Insulated

Deck Description: 18-22 ga., **(See fastening options for steel grade)**, Type B steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**

System Type D(11): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (LWC)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete or Mearlcrete Lightweight Insulating Concrete		
Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Multi-Max FA-3, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r, Sopra-ISO x, Sopra-ISO+ x, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard		
Minimum 1/8" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	**N/A**	**N/A**

Note: Top layer (other than LWC) shall have preliminary attachment, prior to the installation of the base sheet. Additional Insulation (other than LWC) shall be limited to maximum 1" total thickness and shall be applied over a barrier sheet to separate from the LWC. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Soprafix Base 611*, Soprafix Base 610*, Soprafix Base 630*, Soprafix, Soprafix Base 622, Soprafix [S]*, Soprafix Base 612*, Soprafix [F]*, Soprafix Base 613*, Soprafix [X]* or Soprafix Base 614* fastened to the deck as described below:
*Requires torch applied ply sheet.

Fastening #1:	**(*Grade 80 steel deck*)** Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps.
Fastening #2:	**(*Grade 33 steel deck*)** Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps.
Ply Sheet: (Optional)	Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-112.5 psf. (See General Limitation #7.)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 5' o.c. attached to structural supports with one Traxx/5 fasteners spaced 6" o.c. Side laps are fastened 24" o.c. with Traxx/1 fasteners. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**

System Type D(12): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
H-Shield, M-Shield, Sopra-ISO r Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One layer of Soprafix Base 611*, Soprafix Base 610*, Soprafix Base 612*, Soprafix Base 613*, Soprafix Base 614*, Soprafix Base 621, Soprafix Base 622, Soprafix, Soprafix [S]*, Soprafix [X]*, Soprafix [F]* fastened to the deck as described below:
*Requires torch-applied ply sheet

Fastening: Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates, Trufast 2.4" Scoop Seam Plates or SOPREMA #15 HD with SOPREMA 2" Seam Plates, SOPREMA 2.4" Seam Plates spaced 6" o.c. within min. 4" wide, heat-welded side laps.

Ply Sheet: (Optional) One or more plies of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.

Primer: (Optional) Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.

Base Coat: Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.

Reinforcement: Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.

Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	-79 psf. (See General Limitation #7)

Membrane: Liquid Applied Membrane

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 ksi steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(13): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, Sopra-ISO+ x, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard Minimum 0.125" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One layer of Soprafix Base 611*, Soprafix Base 610*, Soprafix Base 630*, Soprafix, Soprafix Base 622, Soprafix [S*], Soprafix Base 612*, Soprafix [F]*, Soprafix Base 613*, Soprafix [X]* or Soprafix Base 614* fastened to the deck as described below:

Fastening #1: Attach base sheet using Trufast #14 HD Fasteners and SOPREMA #14 MP Fasteners with Trufast 2" Barbed Metal Seam Plates and SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -120 psf. See General Limitation #7.)

Fastening #2:	Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -135 psf. See General Limitation #7.)***
Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix [F], Soprafix Base 613, Soprafix [S], Soprafix Base 612, Soprafix [X] or Soprafix Base 614, torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: Liquid Applied Membrane

Deck Type 4I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(14): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (LWC)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete or Mearlcrete Lightweight Insulating Concrete		
Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Multi-Max FA-3, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r, Sopra-ISO x, Sopra-ISO+ x, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard		
Minimum 0.125" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	**N/A**	**N/A**

Note: Top layer (other than LWC) shall have preliminary attachment, prior to the installation of the base sheet. Additional Insulation (other than LWC) shall be limited to maximum 1" total thickness and shall be applied over a barrier sheet to separate from the LWC. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One layer of Soprafix Base 611*, Soprafix Base 610*, Soprafix Base 630*, Soprafix, Soprafix Base 622, Soprafix [S]*, Soprafix Base 612*, Soprafix [F]*, Soprafix Base 613*, Soprafix [X]* or Soprafix Base 614* fastened to the deck as described below:
*Requires torch applied ply sheet.

Fastening #1:	Attach base sheet using Trufast #14 HD Fasteners with Trufast 2" Barbed Metal Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -120 psf. See General Limitation #7.)***
Fastening #2:	Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4" Scoop Seam Plates or SOPREMA #14 MP Fasteners with SOPREMA 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -135 psf. See General Limitation #7.)***
Ply Sheet: (Optional)	Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied.
Primer: (Optional)	Alsan RS 222 Primer applied at a rate of 1-1.5 gal./sq.
Base Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 3.91 gal./sq.
Reinforcement:	Alsan RS Fleece is firmly applied and rolled into the base coat while still wet to ensure adhesion and remove air bubbles. Reinforcement shall be placed carefully to avoid wrinkles and maintain alignment.
Top Coat:	Alsan RS 230 Field, Alsan RS 260 LO Field, Alsan RS 230 Flash or Alsan RS 260 LO Flash applied at a rate of 1.95 gal./sq.
Surfacing: (Optional)	Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications.
Maximum Design Pressure:	See Fastening Requirements above.

STEEL DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.
2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.
   Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. Insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE